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Taking Stock of Temporary Organizational Forms: A Systematic Review and Research Agenda

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This paper brings together the research on temporary organizational forms. Despite a recent surge in publications on this topic, there have been few attempts to integrate knowledge on what we know of such temporary forms of organization. In order to correct this, an integrative framework is proposed around four central themes: time, team, task and context. Within each of these themes, the paper offers an overview of the literature, the gaps in what we know, and what future directions might be taken by scholars hoping to contribute to this important and rapidly growing field.

Related to the increasing attention to time and temporality in management and organization science (Ancona *et al.* 2001; Mitchell and James 2001), management scholars have in increasing numbers started viewing organizational entities such as project ventures (Grabher 2002a; Schwab and Miner 2008), movie sets (Bechky 2006; DeFillippi and Arthur 1998) and task forces (Bigley and Roberts 2001; Weick 1993) as temporary organizational forms. Such forms of organization, deemed the ‘organizational equivalent of a one-night stand’ (Meyerson *et al.* 1996, p. 167) and ‘hyper-efficient organizational form freed from any organizational slack’

(Grabher 2004a, p. 1491) seem to be becoming increasingly prevalent in our globalized fast-paced economy (Ekstedt *et al.* 1999; March 1995). After four decades of research on a great variety of temporary organizational forms (which have in common the fact that they are temporary, i.e. they are characterized by an *ex ante* defined limited period of time of interaction between members), it is time to take stock of what we know, and provide a roadmap for future enquiries. More specifically, such an endeavour seems relevant, timely and necessary.

It is relevant because, although we know that temporary organizational forms are not new (Bechky 2006), new organizational forms are often temporary (Malone and Laubacher 1998). Moreover, whereas some industries have had a long tradition of organizing through temporary organizational structures, such as film making (DeFillippi and Arthur 1998; Jones 1996; Sorenson and Waguespack 2006), theatre (Goodman and Goodman 1972; Goodman and Goodman 1976) and construction (Eccles 1981; Gann and Salter 2000; Kadefors 1995), a myriad of other industries are increasingly adopting this mode of operation, including software development, advertising, biotechnology, consulting, emergency response, fashion, television, and complex products

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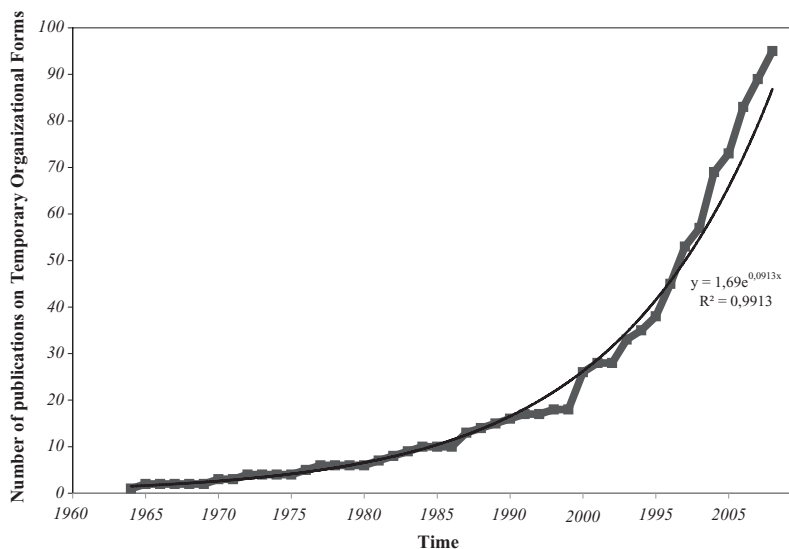


Figure 1. Growth of literature on temporary organizational forms. The figure cumulatively plots 95 works that were identified as pertaining to temporary organizational forms (see 'Research approach') according to their year of publication from 1960 to 2008

and systems (DeFillippi 2002; Grabher 2004a; Hobday 2000; Powell *et al.* 1996; Sydow and Staber 2002; Uzzi 1996; Weick 1993). Also, contemporary industry trends such as 'patching' (Eisenhardt and Brown 1999) and 'e-lancing' (Malone and Laubacher 1998) are indicative of the widely shared notion that, across the board, economic action seems to be increasingly taking place in small, temporary systems of work organization, rather than large permanent organizations (Malone and Laubacher 1998; March 1995).

The present study also seems timely, as there was recently a spike in the number of scholarly works on temporary organizational forms being published, resulting in a body of research that is currently growing exponentially (see Figure 1). In fact, in the last decade (1998–2008), 61 works with an explicit focus on temporary organizational forms were published in books and ISI-indexed journals, against 18 the decade before (1988–1998), which constitutes an increase of 339% (see Figure 1). It seems, then, that it is time to take stock.

Third and finally, such an undertaking seems necessary, as the increase in research attention to temporary organizational forms has hardly been accompanied by integration efforts. This has contributed to a state of the field as consisting of many small and largely unconnected pockets of research. To illustrate this diversity, temporary organizational forms carry a number of different labels, such as

ephemeral organizations (Lanzara 1983), temporary teams (Saunders and Ahuja 2006), transitory organizations (Palisi 1970), short-term projects (Faulkner and Anderson 1987) and disposable organizations (March 1995), which relate to slightly different paradigms, perspectives and research questions. By placing their 'temporariness' centrally, and by pointing out the commonalities and sources of variation between different types of temporary organizational forms, this study does not attempt to provide an exhaustive account of everything written on temporary organization. Instead, the aim is to give an integrated overview of the most important topics and debates in order to identify which directions future research might consider. The above is reflected in the following research question: What are the main topics and debates in the literature on temporary organizational forms, and how should future research proceed in expanding this important field of enquiry?

Before proceeding, some lines need to be drawn. First, even though a fairly rich tradition of work on temporary organizational forms exists, only since quite recently does the field seem to regard itself as a distinct category of interest (see Lundin and Söderholm 1995). It should thus be acknowledged that, by grouping the literature around the temporary organizational form, this review cuts across some paradigms that have had a longer existence, such as, for instance, project management. Some excellent over-

views of such different-but-related fields have already appeared: for example, with a focus on project management as a profession (Morris 1994), a focus on the research on projects (Söderlund 2004) or with a focus on project-based organizations (PBOs) (Gann and Salter 2000; Hobday 1998, 2000; Whitley 2006). In contrast to such reviews (and more in line with the work by Lundin and Söderholm (1995) and Packendorff (1995)), the present paper is primarily interested in the organizational processes, behaviour and social interactions that occur in temporary organizational settings (of which projects are just one), and to analyse these from an organization science perspective. In this sense, the present literature review is at the same time broader than the above-mentioned works in terms of the organizational settings that are included, but more narrow in its theoretical demarcation. This narrow demarcation is mainly manifested in the second important caveat that should be mentioned, namely the fact that, because the 'temporariness' of organizational forms is the variable of interest here, this review and its systematic approach towards identifying relevant literature is primarily targeted at those works that explicitly (rather than implicitly) study organizational systems which are of a temporary nature. Although this might seem obvious, this is an important element in this study's research approach, which will be elaborated shortly. First, however, the temporary organizational form is defined, and the background to the study illustrated.

Defining temporary organizational forms

Temporary organizational forms probably date back to antiquity (Ekstedt *et al.* 1999; Packendorff 1995). It took to 1964, however, for the first scholarly work that explicitly focused on 'the temporary organizational system' as an object of academic interest to be published (Miles 1964).¹ One year later, Bennis (1965, p. 34) claimed that '[t]he social structure of organizations of the future will have some unique characteristics. The key word will be "temporary"; there will be adaptive, rapidly changing temporary systems'. After other ground-laying work in the years after (Palisi 1970), temporary organizational forms were popularized in the 1970s by Goodman (1972) and Goodman and Goodman (1976), who were among the first to

offer an organizational perspective towards the temporary organizational work system. In hindsight, it seems that more recently special issues by, among others, the *Scandinavian Journal of Management* (1995) and *Organization Studies* (2004) have been significant factors in popularizing the field further (see Figure 1). The former successfully re-positioned projects as temporary organizational forms (e.g. Lundin and Söderholm 1995), and the latter emphasized the importance of the linkages between the temporary organizational form and its permanent environment (e.g. Grabher 2004a; Sydow *et al.* 2004).

The focal unit of interest in the present study is the temporary organizational form itself, which can be defined as a set of organizational actors working together on a complex task over a limited period of time (see Goodman and Goodman 1976;² Grabher 2002a; Jones 1996; Meyerson *et al.* 1996). Clearly, this definition spans a relatively broad number of organizational forms, such as R&D projects (Katz 1982), theatre productions (Goodman and Goodman 1972), film sets (DeFillippi and Arthur 1998), emergency response teams (Weick 1993), task forces (Saunders and Ahuja 2006), construction projects (Scarbrough *et al.* 2004b) and sports event organizing committees (Løwendahl 1995). What this definition *does not* pertain to, however, is temporary employment, as in a temporary system 'everyone is temporary, along with the enterprise' (DeFillippi and Arthur 1998, p. 136), whereas temporary employment usually concerns individual temporary membership of an enduring system (e.g. Booth *et al.* 2002).

While the temporary organizational form is the focal unit of interest in this review, the work by Grabher (2002a,b, 2004a,b), in particular, has made a forceful claim that temporary organizational forms should be regarded 'as inextricably interwoven with an organizational and social context which provides key resources of expertise, reputation, and legitimization' (Grabher 2004a, p. 1492). Therefore, a review of this literature should not neglect their enduring context. Generally speaking, this context consists of two levels, the firm level (i.e. the organization(s) in which the temporary system is to a more or lesser extent embedded) and the wider social context (including industry, epistemic community

¹See Miles (1977), on the origin of the concept.

²Please note that this adopted definition is slightly broader than Goodman and Goodman's (1976, p. 494) classic definition, which refers to 'a set of diversely skilled people working together on a complex task over a limited period of time'.

and enduring personal networks; see Engwall 2003; Grabher 2004a). In temporary organizational forms research, the former is often, but not always, a PBO (i.e. an organization in which the project is the most important unit for production organization; see Cacciatori 2008; Hobday 2000), and the latter a project-based industry, in which the primary mode of operation is project based, such as the production of films in the motion picture industry (Bechky 2006; Jones 1996). For the purpose of this study, where the temporary organizational form stands central, the most important feature of context regards the interaction between a temporary organizational system and its environment (Sydow *et al.* 2004). This focuses attention on the cross-level linkages between the temporary organizational form and its firm-level and wider social context, such as the relation between enduring role structures (context) for the co-ordination of tasks on film sets (see Bechky 2006). This theoretical demarcation forms the basis for this paper's methodological approach towards identifying potentially relevant research.

Research approach

In order to arrive at a representative sample of works from the field of temporary organizational forms to ground the research, the literature search commenced with extracting a number of keywords from the labels and definitions that were mentioned in the previous section (see Table 1). These search terms limited the search to finding literature with an explicit interest in temporary organizational forms, rather than those which study an organizational entity which might be temporary, but where this variable does not play a part in the study's analyses and

discussion. (Therefore, I did, for instance, search on the search term 'temporary organization', but not on 'movie set'.) This strategy excluded a number of studies which take place in a temporary setting which is not recognized as being temporary. In other words, there are a large number of studies on teams, for instance, which arguably take place in a temporary setting, but where the fact that they are temporary is not considered or taken into account as important (see Packendorff 1995). Such studies were not covered by the search terms. As can be seen from Table 1, the key words were divided into two categories. The search labels from category A were combined with the search labels from category B, which yielded $6 \times 8 = 48$ concrete search strings. In addition, a number of stand-alone search terms were applied, making a total of 51 concrete search terms. These search terms were then inserted into two search engines: ABI/Inform, and the Thomson ISI Web of Knowledge Social Sciences Division.

This first step identified a total of 5918 unique hits. This large number is not entirely surprising given the general nature of some of the search terms. It is not uncommon in literature reviews to have a large number of hits in a first round of searching (see Pittaway *et al.* 2004; Provan *et al.* 2007). In increasingly more fine-tuned stages of analysis, this number was systematically brought down. This process is depicted in Figure 2.

After it became clear that, on the basis of the relatively low number of relevant papers in the broad pool of 5918 a systematic textual analysis method was not feasible, the literature selection process relied on the author's thorough reading and understanding of the literature, together with a set of more formal decision criteria. These criteria for including or excluding literature from this identified sample were the following.

(1) Only studies were included where temporary organizational forms were studied in the adopted definition thereof, i.e. groups of organizational actors working together on a complex task temporarily. In line with earlier work, 'temporarily' was understood as an *ex ante* defined limited period of time of interaction between members (Grabher 2002a; Jones and Lichtenstein 2008; Sydow *et al.* 2004). (2) Only studies were included in the review where the temporary organizational form was the main unit of analysis. Although this criterion proved to be quite useful, it did pose some challenges with regard to studies on context – which, as just mentioned, are indispensable to our understanding of temporary

Table 1. Search terms

Category A	Category B
Temporary	Organization/Organisation
Transient	System
Ephemeral	Team
Short-lived	Group
Transitory	Firm
Disposable	Project
	Structure
	Institution
Stand-alone search terms	
Project-based	Project network
Project ecology	

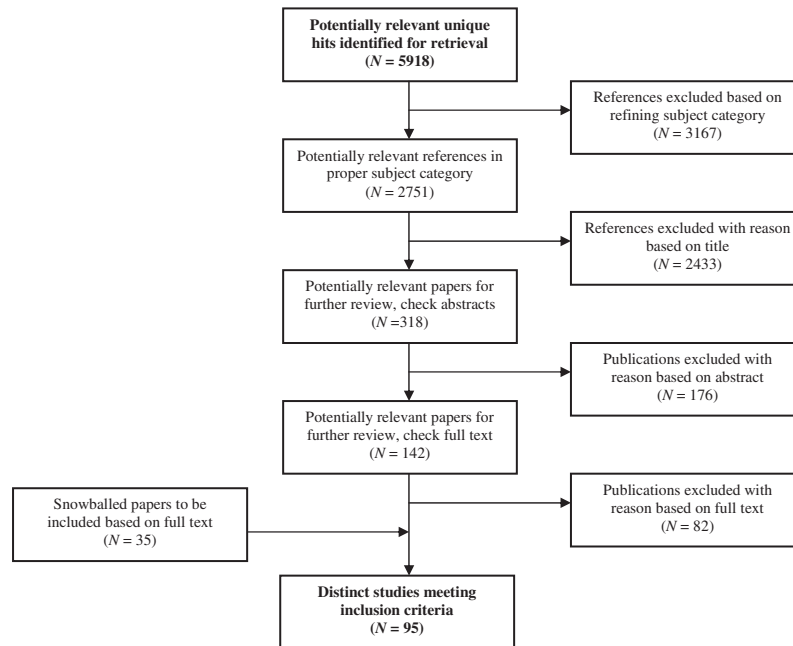


Figure 2. Flow diagram of literature selection process

organizational forms. Obviously, this context is, by itself, not temporary; a PBO, for instance, is 'a durable organizational entity that uses projects to create its services and/or products', whereas temporary systems 'coordinate activities only for the lifespan of the project' (Jones and Lichtenstein 2008, p. 235). In this regard, works on the projectification of mass manufacturing industries that mostly pertain to this industry level were also excluded, as such work tends to focus more on macro-issues such as the division of labour in projectified industries (e.g. Ekstedt 2009), rather than the temporary organizational form itself. To be able to navigate this balance between including important works on context, while staying true to the unit of analysis of this research, this second criterion thus needed some qualification with regard to works on context. More specifically: (2a) works on the context of temporary organizational forms were included only when they studied context with explicit reference to the temporary organizational form. Finally, as a third criterion concerning papers: (3) only articles from ISI ranked journals were included, to ensure a minimum degree of quality of the material.

After this first phase in which works were deleted from the pool of 5918, in a second step a backward and forward snowballing method was applied on the reference lists of the articles found (see Figure 2).

This was done because the analysis revealed that some of the most important work in the field, which on no account could be ignored in a review of the literature because of the rigidity of its method, had appeared either in book chapters (e.g. Meyerson *et al.* 1996) or before the database's first year of inclusion (e.g. Bennis 1965) or were missed for some other, sometimes undetectable, reason. This snowballing procedure, in line with the overall strategy in selecting and analysing literature, relied on a thorough reading and understanding of the potential works to be included, rather than on a (necessarily arbitrarily defined) cut-off value for inclusion. The works added by snowballing were included in the sample (see Figure 2). In all, the total sample of papers included in the literature review numbered 95 works.³ Despite the likelihood that some potentially relevant literature has been missed in the process, it is the author's belief that the final list of papers is largely representative of the work on temporary organizational forms in its current shape. These 95 works form the data on which the claims in this paper are based.

A final step in the research approach pertained to an initial structuring of the 95 identified works around an integrative framework. More specifically,

³These are marked in the Bibliography by an asterisk.

after a close reading of the sample the following approach was taken. First, it was decided to deconstruct Goodman and Goodman's (1976) classic definition of temporary organizational forms into a sensitizing concept (e.g. Blumer 1954), and then to compare it with an influential more recent conceptualization of temporary organization (Lundin and Söderholm 1995), in order to find central themes that these conceptualizations have in common. By deconstructing Goodman and Goodman's (1976, p. 494) definition, four broad themes were found: skills ('a set of diversely skilled people'), interaction ('working together'), task ('on a complex task') and time ('over a limited period of time'). When compared with Lundin and Söderholm's (1995) subsequent list of concepts – time, task, team and transition – these concepts displayed a large overlap (which was interpreted as indicating some degree of reliability). Second, after considering the elaborations of each of these themes by the respective authors, and to come to a parsimonious overview, it was decided to merge the 'skills' and 'interaction' part of the Goodman and Goodman definition into one broad 'team' concept, as in Lundin and Söderholm's classification, as both skills and interaction fit intuitively under this umbrella. As Lundin and Söderholm mention one extra element that Goodman and Goodman did not – transition – this was added as a dimension.

Taking an initial classification as a sensitizing concept, however, meant that it was open to modification if the data so demand (see Blumer 1954). Indeed, later in the process the decision to add transition to the framework was reversed, because there was relatively little literature that could be matched with Lundin and Söderholm's (1995, pp. 442–444) description of this concept. Instead, in line with the previous discussion on the importance of the enduring environment of temporary organizational forms, the theme 'context' was added. Thus, the themes adopted to structure and analyse the literature were time, team, task and context. After closely re-reading all the material and drawing up abstracts for each of the 95 works in the sample (covering general information such as the object of study, the applied methodology and research setting, and impact in terms of citations, together with in what manner each study dealt with one, or several, of the sensitizing concepts of time, team, task, and context), the author was able to identify within each theme the key questions and debates in the current literature. These findings will be presented in the following sections.

The temporary organizational forms literature 1964–2008: overview, gaps and future research directions

The research approach just described led to the integrated overview of the research on temporary organizational forms, from the first publication on the subject (Miles 1964) to the time of the writing of this paper (2008), which is presented below. This discussion is structured as follows. It is organized around the concepts time, team, task and context. Within each of these themes, the review revolves around the key questions posed, rather than a meticulous account of the findings (see Table 2 for an overview). For each theme, an overview of the literature (describing briefly what has been done), the gaps in the literature (describing what has not been done) and future research directions (describing what, in the author's view, should be done) are subsequently presented. To foreshadow a recurring theme in these future directions, particular attention is also paid to how each of the themes can be viewed as a theoretically important dimension of variation between different types of temporary organizational forms. This choice reflects the concern that, although all temporary organizational systems hold the important commonality that they are temporary, there is considerable variation in the types of temporary organizational forms that have been studied in the current body of research, whether they be construction projects, movie sets, emergency response groups or project teams. In fact, I would propose that as important as it is for this field to clearly acknowledge its 'temporariness' as a distinguishing characteristic from other domains and forms, it also needs to deal with its inherent diversity in a systematic way. Therefore, apart from describing what has been done, which gaps there are in the literature, and how future research could tackle these gaps, this paper elaborates on how future research can view each of the themes as theoretically relevant dimension of variation.

Theme 1: Time

Time, the first theme identified in this review, is regarded as being probably one of the most salient dimensions of temporary organizational forms (Grabher 2002a; Jones and Lichtenstein 2008). In temporary organizational forms, time has been variously proposed to be short (Lanzara 1983) and/or

Table 2. Frequencies of themes and methodologies by time period^a

Themes	Key questions posed by extant research	Period 1 1964–1980 Incubation (<i>N</i> = 6)	Period 2 1981–1994 Incremental growth (<i>N</i> = 12)	Period 3 1995–2008 Exponential growth (<i>N</i> = 77)	Total 1964–2008 (<i>N</i> = 95)
Time	1. What is the effect of time limits on processes, functioning, behaviour and performance?	2	4	4	10
	2. How do temporary organizational forms develop over time?	0	3	11	14
	3. How should time itself be envisioned in a temporary organizational setting?	0	0	3	3
Team	1. How do groups of people in temporary organizational systems resolve issues of vulnerability, uncertainty and risk?	1	3	8	12
	2. How is face-to-face interaction shaped in a temporary team environment?	1	3	6	10
	3. How are temporary teams managed?	4	4	10	18
Task	1. What kind of tasks do temporary organizational forms perform?	1	1	10	12
	2. What are the effects of temporary organizational forms having a limited task?	1	0	8	9
	3. How do temporary organizational forms execute tasks most effectively?	1	1	8	10
Context					
Firm	1. How is knowledge that is created in a temporary organizational form sustained in an enduring firm?	0	0	21	21
	2. How can firms manage innovations through temporary organizational ventures?	0	0	8	8
Wider social context	3. What is the impact of embeddedness in the wider exterior context on interior processes of temporary organizational forms?	0	2	20	22
	4. What form do careers take that are made up of subsequent temporary team memberships?	1	2	5	8
Methodology (for empirical works only)					
		Cross sectional	Life cycle ^b	Longitudinal ^c	Total
Conceptual		n.a.	n.a.	n.a.	23
Small <i>N</i> sample		4	36	16	56
Large <i>N</i> sample		6	4	6	16
Total ^d		10	40	22	95

^aValues represent the number of articles in the sample. Some articles deal with more than one theme and question. Time periods were chosen to be roughly of equal length, and were distinct episodes in the evolution of the research field.

^bOne temporary system cycle is studied over time.

^cMultiple temporary system cycles are studied over time.

^dThese sum to 95 when conceptual papers are added.

limited (Grabher 2004a), but at the very least different (Miles 1964) from how it is conceived of in other organizational forms. Table 3 summarizes this theme.

Overview of the literature

As temporary systems are most prominently characterized by their time limits (e.g. Jones and Lichten-

stein 2008), a key question scholars have first asked is: *What is the effect of time limits on processes, functioning, behaviour and performance?* (studied by *N* = 10 works). These concern, for instance, issues such as time use by participants, communication, norms, role definition, leadership, decision-making, organization structure, co-ordination techniques and focus (e.g. Bryman *et al.* 1987a; Jones and Lichtenstein 2008; Miles 1964; Palisi 1970; Saunders and

Table 3. The time theme in temporary systems research

Key questions	Summary
1. What is the effect of time limits on processes, functioning, behaviour and performance?	(Anticipated) time limits of temporary organizational forms affect issues such as <i>time use</i> by individual members, <i>communication</i> , <i>norms</i> and <i>role definition</i> (Miles 1964), <i>leadership</i> (Bryman <i>et al.</i> 1987a,b), democratic rather than authoritarian <i>decision-making</i> and <i>organization structure</i> (Palisi 1970), and the kind of <i>co-ordination techniques</i> that are used to manage uncertainty (Jones and Lichtenstein 2008). On the basis of attention focus models and shadow of future models, temporary teams have been proposed to be different from ongoing teams because members do not anticipate future interaction with each other beyond the imminent deadline. Therefore, they are not concerned with the long-term efficiency of the processes (Saunders and Ahuja 2006). This implies a shift towards <i>task-focus</i> . However, there has been work on the importance of <i>interpersonal relations</i> (e.g. Miles 1964; Palisi 1970) because these can endure beyond the temporary organizational form (e.g. Bechky 2006; Engwall 2003; Grabher 2002a, 2004a).
2. How do temporary organizational forms develop over time?	Sequential models of group development, such as <i>project life cycle models</i> , and non-sequential group development models, such as <i>punctuated equilibrium</i> (e.g. Engwall and Westling 2004; Gersick 1988, 1989; Katz 1982; Lundin and Söderholm 1995; Packendorff 1995).
3. How should time itself be envisioned in a temporary organizational setting?	In temporary systems, time should be envisioned as <i>linear</i> , whereas in enduring organizations, rather a <i>cyclical</i> time conception is applied (Ibert 2004; Lundin and Söderholm 1995). Strategy of the <i>future perfect</i> (Pitsis <i>et al.</i> 2003).

Ahuja 2006). There seems to be agreement that, in general, issues such as leadership (Bryman *et al.* 1987b) and group interaction (Saunders and Ahuja 2006) in temporary organizational forms would favour a task focus over a relationship focus. It should be noted, however, that most of this work is conceptual and, moreover, has set forth some conflicting propositions (see Table 3).

A second question which has been posed concerns: *How do temporary organizational forms develop over time?* ($N = 14$). Authors such as Gersick (1988, 1989), Katz (1982) and Engwall and Westling (2004), for instance, focused on models of group development. Here, two broad stances can be distinguished. On the one hand, there is work on sequential group development models that resemble the project life cycle model (see Lundin and Söderholm 1995; Packendorff 1995), which assumes that groups generally go through the same set of predefined stages. On the other hand, non-sequential group development models such as the punctuated equilibrium model have been observed in temporary project teams (Engwall and Westling 2004; Gersick 1988, 1989), which draws attention to moments of sudden change (Engwall and Westling 2004) in the form of midpoint transitions (Gersick 1988, 1989) halfway through the life of a temporary system. In the latter model, mechanisms of change of the temporary organizational form over time stand central.

The third question that the existing literature, albeit in smaller numbers, has aimed to answer with

regard to the time theme concerns: *How should time itself be envisioned in a temporary organizational form?* ($N = 3$). Ibert (2004, p. 1530), for instance, claimed that '[t]he main difference between a temporary project venture and a firm is their conceptions of time. For a firm a *cyclical time conception* is applied, whereas the project follows a *linear time conception*.' A similar viewpoint underlies Lundin and Söderholm's (1995) discussion of the subject, which covers linear, cyclical and spiral conceptions of time. Lundin and Söderholm similarly come to the conclusion that in temporary organizational forms, 'time is used ... in a linear form, to lead the way from a starting-point to termination' by virtue of being able to foresee a 'linear foreseeable sequence' (p. 440). Lundin and Söderholm (1995) make the case that such a conception of time as linear implies that, because it is continuously fleeting, time is treated as scarce and valuable (cf. Pitsis *et al.* 2003) (see Table 3).

Gaps and future research directions

The most important gap in the time theme concerns our knowledge of the effects of 'temporariness' (key question 1). It seems that the fact that temporary organizational forms are time-delimited has an effect on processes and outcomes, and the behaviour of their members (Bryman *et al.* 1987a; Jones and Lichtenstein 2008; Saunders and Ahuja 2006). However, of the ten studies which focus on this ques-

tion, eight are conceptual. By combining this work, this review indicates that open empirical questions concern, for instance, 'Are temporary groups relatively more concerned with the task, and less with relationship building than permanent groups, because they have a limited shadow of the future?' (Saunders and Ahuja 2006). Moreover, how does this translate into group dynamics such as team cohesiveness, psychological safety and conflict? If groups of people in temporary organizational forms are less relationship oriented, how does this relate to performance (i.e. is it necessary for temporary teams at all to develop relationship oriented phenomena such as team identity and a positive group climate, when all they need to do is accomplish a short-term task?)? Do temporary groups process information differently, for instance heuristically rather than systematically, because of limited duration (cf. Meyerson *et al.* 1996)? Under which conditions is leadership in temporary organizational systems mostly concerned with task-related issues (Bryman *et al.* 1987b), and under which conditions does it focus more on social relations (Miles 1964)? How do the degree and pattern of co-operation evolve in temporary organizational forms, and how is this influenced by the approaching deadline (Ness and Haugland 2005)? Such propositions could be aptly tested in controlled studies (such as experiments) in order to determine causality and control clearly for other confounding factors. Field research, however, is also necessary, in order to determine how the embeddedness of social actors in an enduring and overlapping context moderates these effects. Such research could have broad implications, as we still know relatively little of the effects of time (limits) on a plethora of organizational processes more generally (see, for instance, Ancona *et al.* 2001; Mitchell and James 2001).

A second gap in the time theme pertains to the second key question covered in extant research: *How do temporary organizational forms develop over time?* As mentioned earlier, this stream of research has been concerned mostly with the project life-cycle model (Packendorff 1995) and punctuated equilibrium (Gersick 1988, 1989). There are many alternative models of group development, however (e.g. recurring-cycle, social entrainment and adaptive structuration; see for instance Chidambaram and Bostrom (1996)), and they could be incorporated in temporary organizational forms research in order to gain a richer perspective on how temporary organizational forms develop over time. This applies both within the lifetime of a single temporary system and

over succeeding temporary ventures. A key challenge herein is to study whether these group evolution mechanisms differ between different types of temporary organizational forms.

Time can also aptly be seen as an important source of variation between different types of temporary organizational forms, by distinguishing between those of short versus long duration. More specifically, although it seems that the limited duration of temporary organizational forms is often interpreted as necessarily implying short duration (e.g. Porsander 2000), this need not be the case (e.g. Shenhar 2001b). Authors such as Engwall and Westling (2004) studied temporary organizational systems with a duration of 5 years, and Shenhar (2001b) those with a duration of up to 12 years. Although the lifespan of the latter systems is limited in time (by a deadline some 5–12 years in the future), many would feel a duration of 5 years or longer does not qualify as 'short' (see Sydow *et al.* 2004). There seems to be a debate in the literature on whether systems of relatively longer duration (although still limited by a deadline in a distant future) should be called 'temporary'. The dominant view suggests they should (e.g. Engwall and Westling 2004; Grabher 2002a; Jones and Lichtenstein 2008). Therefore, the duration of temporary organizational forms is something which can vary, and it probably has important implications. Areas which are probably affected by the duration of temporary organizational forms are, for instance, trust and social relations. More specifically, when temporary organizational forms are extremely short in duration, there is not enough time to develop processes such as personal relations (Morley and Silver 1977), regular trust (Meyerson *et al.* 1996) or a shared task-relevant knowledge base (Lindkvist 2005) within the temporary organizational form. Therefore, there are other mechanisms at play, such as swift trust (Meyerson *et al.* 1996). Temporary systems of relatively longer duration are, in contrast, more likely to develop processes more similar to those found in non-temporary work organization (Sydow *et al.* 2004). As such, explicitly and systematically distinguishing between temporary organizational forms of short and long duration is an important direction for future research to consider.

Theme 2: Team

The second theme in the literature on temporary organizational forms, team, relates to the fact that

Table 4. The team theme in temporary systems research

Key questions	Summary
1. How do groups of people in temporary organizational systems resolve issues of vulnerability, uncertainty and risk?	Issues of vulnerability, uncertainty and risk are resolved through <i>swift trust</i> rather than the regular trust found in enduring organizations (Meyerson <i>et al.</i> 1996; Saunders and Ahuja 2006; Xu <i>et al.</i> 2007). <i>Social, temporal and structural embeddedness</i> in an enduring context resolves issues of co-ordination and uncertainty by providing (social) structure and institutional safeguards (Eccles 1981; Jones and Lichtenstein 2008; Sydow and Staber 2002).
2. How is face-to-face interaction shaped in a temporary team environment?	Face-to-face interaction in temporary teams is to a large extent structured by <i>role-related behaviour</i> , the specifics of which are only negotiated <i>in situ</i> (Baker and Faulkner 1991; Bechky 2006; Weick 1993), for instance, by role-based joking (Bechky 2006; Terrior and Ashforth 2002). <i>Communication</i> in temporary organizational systems is important to co-ordinate tasks. Its content relatively more focused on task-related issues than on inter-personal issues (because time limits narrow attention to the task, Saunders and Ahuja 2006) and its amount tends to decrease as a function of increasing group longevity (Katz 1982). Communication should adhere to norms of respectful interaction (Miles 1964; Weick 1993).
3. How are temporary teams managed?	<i>Leadership</i> is mostly concerned with 'soft' aspects such as interpersonal liking, fostering an <i>esprit de corps</i> , and democratic participation (Bennis 1965; Miles 1964; Morley and Silver 1977; Palisi 1970) or, conversely, more with 'hard' aspects such as task focus because leaders face severe sanctions for time or budget slippage (Bryman <i>et al.</i> 1987a,b). <i>Team design</i> is crucial in teams of cycling and re-cycling members (Morley and Silver 1977; Perretti and Negro 2006). <i>Management interventions</i> benefit group performance, but only for high ability project teams (Kernaghan and Cooke 1990).

temporary organizational forms in the adopted definition thereof are systems that include interdependent sets of people working together (Goodman and Goodman 1976). In fact, the team seems to constitute the temporary organizational form to a large extent empirically (Lundin and Söderholm 1995), and studies considering team aspects of temporary organizational forms usually take the group (i.e. a collective of individual people, rather than organizational entities) as the unit of analysis (e.g. Saunders and Ahuja 2006). Considering Goodman and Goodman's (1976) and Lundin and Söderholm's (1995) work, the team dimension of temporary systems relates to issues such as skills, human resources and interdependence. Table 4 summarizes this theme.

Overview of the literature

Concerning the team in temporary organizational forms research, a number of key questions have been dealt with in the current body of literature. First, since it has been established that in temporary systems groups of people often operate under constraints of high uncertainty and interdependence (e.g. Jones and Lichtenstein 2008; Lanzara 1983; Morley and Silver 1977) researchers have asked how temporary teams resolve issues of vulnerability, uncertainty

and risk ($N = 12$). As Meyerson *et al.* (1996) suggest, this is a crucial issue for teams in temporary organizational systems, since temporary organizational forms depend on interdependent sets of diverse skills and knowledge sets, yet they lack the time to engage the usual forms of confidence-building found in enduring organizations. How teams of people then cope with such circumstances, and how their membership in enduring institutions influences issues of uncertainty has inspired a considerable body of research (e.g. Jones and Lichtenstein 2008; Meyerson *et al.* 1996; Saunders and Ahuja 2006; Sydow and Staber 2002; Xu *et al.* 2007) (see Table 4). Arguably the most influential theory to come out of this work is Meyerson *et al.*'s (1996) theory of 'swift trust', which proposes that, in temporary organizational systems, groups work on a different kind of trust, which swiftly emerges presumptively, rather than slowly over gradual experiences (p. 170).

A second, and related, important question within this theme concerns: *How is face-to-face interaction shaped in a temporary team environment?* ($N = 10$). Goodman and Goodman (1976, p. 495) already claimed that one of the challenges that temporary organizational forms face is that, owing to the complexity of their task, and the limited time in which to

execute it, 'members must keep interrelating with one another in trying to arrive at viable solutions'. Some research in this regard has focused on the behaviour of participants in temporary teams (such as Bechky 2006; Terrion and Ashforth 2002), while others on (the level of) communication between them (e.g. Katz 1982; Miles 1964; Weick 1993), and yet others studied the content of their messages (Saunders and Ahuja 2006). One interesting finding in this regard concerns that face-to-face interaction in temporary teams seems to be to a large extent structured by role structures which endure beyond single temporary team memberships (Baker and Faulkner 1991; Bechky 2006; Weick 1993) (see Table 4).

A third and final often studied question posed in temporary organizational forms research in the team theme concerns: *How are temporary teams managed?* ($N = 18$). This stems from the suggestion that temporary organizational systems pose distinct challenges to leadership (e.g. Bryman *et al.* 1987b), while effective leadership at the same time is crucial to their success (e.g. Weick 1993). Whereas some studies in this regard have focused on leadership itself (e.g. Bryman *et al.* 1987a,b; Miles 1964; Morley and Silver 1977), which has led to a relationship-oriented stance and a task-oriented stance (e.g. Bryman *et al.* 1987a), others have focused on issues such as team design (e.g. Perretti and Negro 2006) and the effectiveness of management interventions (Kernaghan and Cooke 1990). An interesting finding in the latter category is that management interventions seem to benefit temporary team performance, but only for high ability project teams (Kernaghan and Cooke 1990) (see Table 4).

Gaps and future research directions

An important gap in the literature within the team theme pertains to the first and second key question equally, as we know relatively little of how interaction is shaped and how temporary groups resolve issues of vulnerability and risk. In particular, it seems that there are at least two viewpoints here, which relate to the antecedents of swift trust (Meyerson *et al.* 1996) and how this relates to the social embeddedness of actors in enduring, and sometimes overlapping networks of relations (Jones and Lichtenstein 2008). Bechky (2006, p. 4) arguably most forcefully claimed that 'that the portrayal of temporary organizations as ephemeral, unstable systems that require swift trust is inaccurate: In fact, these organizations are organized around enduring,

structured role systems whose nuances are negotiated *in situ*.' Similarly, Eccles (1981) proposed that temporary organizational forms in the construction industry are structured as 'quasifirms' by stable and recurring relations between the general contractor and a small pool of subcontractors, and Clegg and Courpasson (2004) argued that projects retain elements of hierarchical control, albeit in a remote form rather than direct. Context is hereby introduced in team co-ordination, and shown to be inseparable from it. Jones and Lichtenstein (2008) take a similar, yet different, position in claiming that swift trust or embeddedness in enduring role or relational structures is not a matter of either/or, but rather that swift trust itself evolves out of social structure and enduring processes. In fact, Jones and Lichtenstein (2008, p. 249) propose that 'swift trust is possible only because transactional uncertainty has been reduced through shared understandings that clarify knowledge content, roles, and role behaviours needed for effective coordination'. As such, swift trust might be less related to interpersonal attraction, but rather resembles institutional trust, embedded in the collective experience of the industry and therefore not created 'swiftly' on the spot (Jones and Lichtenstein 2008).

Relating to the recurring future direction of systematically studying variation between different types of temporary organizational forms, it seems that one important factor that has been overlooked thus far in this discussion concerns the variation between the types of temporary organizational forms that are envisioned in Meyerson *et al.*'s (1996) theory of swift trust, and the movie sets studied by Bechky (2006) or the construction projects studied by Eccles (1981). Whereas Meyerson and colleagues, borrowing from Goodman and Goodman (1976), define temporary systems as consisting of teams of people 'who have never worked together before and who do not expect to work together again' (Meyerson *et al.* 1996, p. 168), on Bechky's film sets, for instance, 'crew members have high expectations of interacting with some of the same people on future projects' (Bechky 2006, p. 15). In the latter circumstances, Bechky (2006) demonstrated the interplay between structure and the negotiated enactment of roles for shaping interaction in temporary teams. Therefore, I would suggest that, with regard to this gap, future research could push further in identifying the conditions under which interaction and co-ordination in temporary organizational groups are principally emergent and swift (if at all) and when

Table 5. The task theme in temporary systems research

Key questions	Summary
1. What kind of tasks do temporary organizational forms perform?	<p>Many, from shooting a film to organizing big events, to tending to emergencies to constructing buildings (e.g. Bechky 2006; Bigley and Roberts 2001; Kadehors 1995; Pipan and Porsander 2000).</p> <p>Tasks are <i>complex</i>. Complexity can vary between routine and one-off type of tasks and as a function of the nature of the work and the technological uncertainty surrounding its execution (Brady and Davies 2004; Löwendahl 1995; Meyerson <i>et al.</i> 1996; Shenhar 2001a).</p> <p>Tasks are <i>finite</i>. Temporary organizational forms are characterized by one, or a very limited number of tasks (e.g. Lundin and Söderholm 1995; Whitley 2006). When the task is completed, the temporary system disbands (e.g. Baker and Faulkner 1991; DeFillippi 2002; Sorenson and Waguespack 2006).</p>
2. What are the effects of temporary organizational forms having a limited task?	<p>Because tasks of temporary organizational forms are limited, they run the risk of <i>knowledge dispersing</i> when the task is finished and the temporary system dissolves (Grabher 2002a, 2004a; Ibert 2004; Scarbrough <i>et al.</i> 2004a,b; Sydow <i>et al.</i> 2004).</p> <p>Having a clearly delimited short-term task without a shadow of the future can lead to a <i>task-orientation</i>, at the expense of attention to interpersonal relations (Grabher 2004a; Miles 1964; Saunders and Ahuja 2006) and to a focus on <i>action</i> rather than decision-making (Ekstedt <i>et al.</i> 1999; Lundin and Söderholm 1995).</p>
3. How do temporary organizational forms execute tasks most effectively?	<p>Presence of <i>invisible social infrastructures</i> (such as role systems) facilitates task execution (Brady and Davies 2004; Van Fenema and Räisänen 2005; Weick 1993)</p> <p>Being <i>isolated</i> during the task execution phase limits disturbances to task completion (Lundin and Söderholm 1995; Miles 1964).</p> <p>Temporary organizational forms are <i>task focused</i>, which holds a promise of hyper-efficient organizational form, but this will more likely benefit effectiveness than efficiency (Grabher 2004a; Saunders and Ahuja 2006).</p> <p><i>Improvising</i> is an important way for temporary systems to co-ordinate non-routine tasks (Bigley and Roberts 2001; Weick 1993).</p>

they are rather structurally bound. A crucial variable to consider in this regard is thus whether participants have a realistic expectation of future collaboration by being embedded in overlapping networks or industries.

A distinction should also be made between co-located and geographically distributed temporary teams (Kavanagh and Kelly 2002). Co-located teams have been claimed to be more prevalent, as it has been proposed that temporary organizational forms often, but not at all necessarily, collaborate within densely knit clusters with high spatial proximity (Grabher 2002a). In general, this dimension will probably have strong implications with regard to interaction and knowledge transfer as, despite technological advances, spatial proximity still seems to be important for social interaction and knowledge transfer in temporary organizational systems (Breu and Hemingway 2004; Kavanagh and Kelly 2002; Sapsed *et al.* 2005). There are several arguments why co-location of temporary organizational system members can have beneficial effects on learning, including the possibility of rapid and 'rich' face-to-face interaction, access to local communities of practice, and developing a common context of

understanding (Grabher 2002a; Kavanagh and Kelly 2002). In sum, then, besides being an important theme in the literature, team is also an important dimension of variation.

Theme 3: Task

The third central theme in research on temporary organizational forms concerns the task that they execute. It is claimed that task definitions are the *raison d'être* for a temporary system (Lundin and Söderholm 1995), as in most instances 'the creation of a temporary organization is motivated by a task that must be accomplished' (Lundin and Söderholm 1995, p. 441). Table 5 provides an overview of this theme.

Overview of the literature

It seems that, within the task theme, extant research has mainly studied three major questions. The first of these focuses on: *What kind of tasks do temporary organizational forms perform?* ($N = 12$). Existing work has pointed out the diversity in the tasks that

temporary organizational forms undertake, ranging from shooting a film (Bechky 2006) to organizing big events (Pipan and Porsander 2000), and from tending to emergencies (Bigley and Roberts 2001) to constructing buildings (Kadefors 1995). Almost always there is a certain degree of complexity involved in this task (Meyerson *et al.* 1996). Moreover, the tasks of temporary organizational forms are often characterized as being finite, i.e. as having a deadline (e.g. Meyerson *et al.* 1996) (Table 5).

Secondly, because having a limited task is one of the crucial features of temporary organizational systems, extant research has studied: *What are the effects of temporary organizational forms having a limited task?* ($N = 9$). It has been proposed in this regard that one of the most significant consequences of the finite task which temporary systems undertake is the fact that 'knowledge that is accumulated in the course of a project is at risk of being dispersed as soon as the project team is dissolved and members are assigned to a different task' (Grabher 2004a, p. 1492), which relates to the problem of knowledge transfer and learning in temporary organizational forms. Temporary systems' clear task and finite nature thereof have also been associated with a radical task-orientation (Grabher 2004a, p. 1491), and a focus on action rather than decision-making (Lundin and Söderholm 1995).

A third important question in this theme concerns: *How do temporary organizational forms execute their task most effectively?* ($N = 10$). Here, research has, for instance, focused on the presence of certain context variables (such as a social infrastructure) that render temporary systems more task-effective (Bechky 2006; Brady and Davies 2004; Van Fenema and Räisänen 2005; Weick 1993). Others have pointed to how the task-needs of temporary organizational forms differ over the life cycle of the temporary venture (Lundin and Söderholm 1995) and yet others (e.g. Saunders and Ahuja 2006; Weick 1993) to how temporary organizational systems particularly deal with tasks differently from other organizational forms (see Table 5).

Gaps and future research directions

With regard to the task theme, it seems that there is room in the current body of literature for a more fine-grained perspective on the tasks that temporary organizational forms solve, and the variation associated with that. Most obviously, one should distinguish between unique tasks and routine tasks. Some

authors, such as Goodman and Goodman (1976), have proposed that the tasks of a temporary organizational systems are 'almost unique' (p. 495). This is a position that is found in the literature more often, as many (e.g. Gann and Salter 2000; Lindkvist *et al.* 1998; Meyerson *et al.* 1996) have also referred to the one-off and exceptional tasks that temporary organizational systems often execute. Such unique tasks supposedly create ideal circumstances for developing creativity and change (Miles 1964), but leave relatively little room for learning (Ibert 2004) or the development of routines (Meyerson *et al.* 1996). Recently, the view of temporary organizational systems as systems dealing solely with unique tasks has been suggested to be problematic as, in the words of Brady and Davies (2004, p. 1605), 'it equates project-based activities with non-routine behaviour', whereas often 'firms undertake "similar" categories of projects ... involving repeatable and predictable patterns of activities'. When tasks are more routine, this is generally conducive to learning, as this lowers learning boundaries (Scarbrough *et al.* 2004b). As Lundin and Söderholm (1995, p. 441) mention, '[w]hen a temporary organization is assigned a repetitive task, the actors know what to do, and why and by whom it should be done'. Moreover, when temporary systems are repetitive in kind, so-called project capabilities (Brady and Davies 2004) can be developed, which concern knowledge and instructions about how to set up and execute repetitive temporary projects.

Besides 'just' distinguishing between unique and routine tasks, there also seems to be a gap in the current body of literature with regard to how task uniqueness and task complexity have been conceptualized. Specifically, when variation is acknowledged at all, both tend to be regarded as dichotomous (simple vs complex, unique vs repetitive), whereas it seems that these are more likely variables that can take on many intermediate degrees, pertaining to different elements of the task. In particular, the rich work on organizational routines, spearheaded by authors such as March and Olsen (1989) and Feldman (2000), could enrich this current perspective. The former, among others, demonstrated that even tasks regarded as highly unique can have routine elements. One often cited example concerns the Norwegian oil fields. Lacking any experience with oil, the Norwegians drew on their knowledge of shipping as a source of routines, regarding an oil rig as 'a somewhat peculiar ship' (March and Olsen 1989, p. 36). As such, routines

Table 6. The context theme in temporary systems research

Key questions	Summary
Firm-level context	
1. How is knowledge that is created in a temporary organizational form system sustained in an enduring firm?	Through <i>project-based</i> (or <i>project-to-context</i>) <i>learning</i> PBOs can sustain knowledge from temporary organizational forms (e.g. Bresnen <i>et al.</i> 2004; Gann and Salter 2000; Grabher and Ibert 2006; Hobday 2000; Keegan and Turner 2001; Lundin and Midler 1998; Sahlin-Andersson and Söderholm 2002; Sydow <i>et al.</i> 2004), even as the capacity to learn has been said to be one of the major drawbacks of PBOs (e.g. Hobday 2000). Memory objects (Cacciatori 2008), learning boundaries (Scarbrough <i>et al.</i> 2004b), knowledge codification (Prencipe and Tell 2001), economies of repetition and project capabilities (Brady and Davies 2004) are major factors determining the extent of project-based learning taking place.
2. How can firms manage innovations through temporary organizational ventures?	PBOs are key settings to achieve innovation because they create and re-create organizational structures around the demands of specific projects (Hobday 1998, 2000). Important issues with regard to project-based innovation concern the integration of business and project processes (Barrett and Sexton 2006; Gann and Salter 2000), organizational structures (Hobday 2000), factors that impede innovation in projects, such as a project management style that centres around evaluation and control (Keegan and Turner 2002), and the importance of face-to-face interaction (Salter and Gann 2003).
Wider social context	
1. What is the impact of embeddedness in a wider exterior context on interior processes of temporary organizational forms?	<i>Structural, institutional, social and temporal embeddedness</i> in enduring (role) structures (e.g. reputation, macro-cultures) has an effect on interior processes such as co-ordination, practices and pacing (e.g. Baker and Faulkner 1991; Engwall 2003; Hellgren and Stjernberg 1995; Jones 1996; Jones and Lichtenstein 2008; Sydow and Staber 2002; Windeler and Sydow 2001). Vice versa, <i>cumulative</i> performance-outcome learning shapes collaborative patterns of co-operation (Schwab and Miner 2008). <i>Repeated collaboration</i> is another important context variable (e.g. Faulkner and Anderson 1987; Schwab and Miner 2008; Sorenson and Waguespack 2006) but need not necessarily lead to positive outcomes. When controlled for self-confirming dynamics, temporary organizational forms which are highly embedded in prior relations perform worse (Sorenson and Waguespack 2006).
2. What form do careers take that are made up of subsequent temporary team memberships?	Project-based industries are characterized by restricted access to resources, an active elite and recurrent contracting. Careers in such industries do not take place within firms; individuals move from temporary team to temporary team, receiving validation from the market and building <i>career capabilities</i> regarding knowing why (an individual's values, motivation and identity), knowing how (skills and expertise) and knowing whom (an individual's network) (Arthur <i>et al.</i> 2001; DeFillippi and Arthur 1998; Faulkner and Anderson 1987; Goodman and Goodman 1976; Jones 1996).

were borrowed from a different context, making their task partly less unique (Feldman 2000). The perspectives developed in this literature should inform future studies on temporary organizational forms in order to deconstruct the tasks that temporary systems undertake into discrete elements of more or less complexity and uniqueness. Such analyses, then, could in turn enrich our current theories with respect to, for instance, project-based learning (Cacciatori 2008; Prencipe and Tell 2001; Scarbrough *et al.* 2004a,b), and economies of repetition (Brady and Davies 2004).

Theme 4: Context

The fourth and final theme distinguished in the literature on temporary organizational forms concerns

context. With this theme, authors focus on the linkages between the temporary organizational venture and its enduring environment. Whereas much of the early work employed a 'lonely project' perspective on temporary organizational forms, basically neglecting context (Engwall 2003), more recent work has increasingly emphasized a contextual perspective on temporary organizational forms, which sees temporary organizational forms as inextricably embedded within an organizational and social context (Grabher 2002a, 2004a; Sydow and Staber 2002). As mentioned before, two levels of analysis are distinguished in the current body of research within this theme: the level of the firm (mostly a PBO) and the level of the wider social context (mostly a project-based industry or community of practice). Both are elaborated below. Table 6 provides an overview this theme.

Overview of the literature

The firm-level context. Temporary organizational forms often, although certainly not always, rely on one or several organizations, which found, create or necessitate its creation. The predominant body of research which has studied this firm-level context, and the dependencies and relations between the temporary organizational system and the firm-level context more specifically, have focused on a specific kind of organizational form, namely the PBO (e.g. Gann and Salter 2000; Hobday 1998, 2000; Prencipe and Tell 2001; Whitley 2006). With regard to the linkages between the temporary system and the firm, extant research has first asked: *How can knowledge that is created in a temporary organizational form be sustained in an enduring firm?* ($N = 21$). This relates to the important issue of project-to-firm learning before the project dissolves (Brady and Davies 2004; Grabher 2004a), which is one of the critical issues for PBOs (Hobday 1998, 2000; Prencipe and Tell 2001). Indeed, how enduring benefits are achieved from temporary organizational forms through learning seems to be currently one of the hot issues in the body of literature, emphasizing elements such as memory objects, embeddedness, developing routines and project capabilities (e.g. Brady and Davies 2004; Cacciatori 2008; Keegan and Turner 2001; Lundin and Midler 1998; Prencipe and Tell 2001; Scarbrough *et al.* 2004b) (see Table 6).

A second central question that existing research has posed in regard to the firm and the temporary organizational form is: *How can firms manage innovations through temporary ventures?* ($N = 8$). This relates to the proposition that projects by their distinctive features provide to be key settings to achieve innovation, for instance because they create and recreate organizational structures around the demands of specific projects (Hobday 2000). Important issues which extant work has considered with regard to project-based innovation concern uncovering best practice such as the integration of business and project processes (Barrett and Sexton 2006; Blindenbach-Driessen and Van den Ende 2006; Gann and Salter 2000), studying which organizational structures are best equipped to deal with innovative products (Hobday 2000) and identifying the factors that impede innovation in temporary ventures, such as a project management style that centres around evaluation and control (Keegan and Turner 2002) (see Table 6).

The wider social context. Several influential scholars have emphasized in recent years that, apart from being embedded in an organizational context, temporary organizational forms are also influenced by the wider enduring interpersonal networks, epistemic communities and industries in which their participants are embedded (Baker and Faulkner 1991; Grabher 2004a; Jones 1996; Sydow and Staber 2002; Windeler and Sydow 2001). A first key question that the existing work has studied with regard to the relation between the temporary organizational form and the wider social context concerns: *What is the impact of embeddedness in a wider exterior context on interior processes in temporary organizational systems?* ($N = 22$). This question has been posed most explicitly by Engwall (2003), who argued that no temporary organizational system is an island. Research which has studied this question has focused on the impact of the environment on co-ordination (Bechky 2006) and uncertainty (Jones and Lichtenstein 2008), project practices (Windeler and Sydow 2001), differences in the growth and viability of project networks (Sydow and Staber 2002), and the uniqueness, legitimacy and prestige of a temporary system (Engwall 2003) (see Table 6). In addition, there are a considerable number of articles which study how the presence or absence of repetitive ties between the participants involved in the temporary system (which can be thought of as the temporal context of the temporary organizational form) influence behaviour, learning and the propensity to engage in subsequent temporary ventures (e.g. Faulkner and Anderson 1987; Schwab and Miner 2008; Sorenson and Waguespack 2006). A fascinating finding in the latter category is that, when controlling for the amount of resources that are invested in temporary organizational ventures, firms with deeper prior relations between the actors involved perform worse at the box office (Sorenson and Waguespack 2006) (see Table 6).

A second and final important question that has been studied concerns: *How are careers shaped in project-based industries that are made up of subsequent temporary system memberships?* ($N = 8$). Goodman and Goodman (1976, p. 495) already noted the human resource problems of temporary organizational system memberships for career progression, as 'ad hoc assignments interrupt typical career patterns by drawing people away from their usual functional role'. Although there is merit in this claim, subsequent research has tended rather to study industries in which the entire standard of operation is

project-based, such as the Hollywood film industry, in which there is no functional role to return to (DeFillippi and Arthur 1998; Faulkner and Anderson 1987; Jones 1996), focusing on such issues as successful career progression in project-based industries (e.g. Jones 1996) and the building of career capital (e.g. Arthur *et al.* 2001) (see Table 6).

Gaps and future research directions

With regard to the context theme, extant research has come a long way in identifying the organizational, social and institutional environment of temporary organizational forms (e.g. Engwall 2003; Grabher 2002b, 2004a; Schwab and Miner 2008; Windeler and Sydow 2001). In fact, the contextual perspective, highlighting the importance of the exterior environment of temporary organizational forms for interior processes, is one of the major accomplishments in temporary systems research in recent years, and it is self-evident that future research should continue work in this terrain, especially on the dialectic between temporary organizational form and its permanent environment. A largely neglected issue in this terrain, however, concerns the (potentially conflicting) loyalties of project participants towards the project versus their ongoing activities in the enduring context (see Grabher 2002a, p. 212; Clegg and Courpasson 2004) and how such 'home-base' activities impact on processes within the temporary system. Similarly, the issue of multiple team membership (Mortensen *et al.* 2007) poses important questions with regard to the embeddedness of actors in multiple, concurrent temporary organizational systems and the effects this has on issues such as uncertainty, job strain and commitment. This pertains to the dilemma between the autonomy requirements of participants in temporary systems and their embeddedness in organizational settings that demand integration of temporary activities within organizational routines (Sydow *et al.* 2004). Miles (1964), for instance, elaborately highlighted the virtues of participants in temporary organizational forms being autonomous and isolated, 'apart together' groups of people, left to their own devices. However, the benefits of embeddedness in enduring context with regard to knowledge transfer are well-documented (Ibert 2004; Scarbrough *et al.* 2004b). I would propose to re-position this dilemma into a strategic choice for organizations. Lundin and Söderholm (1995) hinted in this direction by mentioning that the degree of isolation/embeddedness of a temporary

organization should be a function of the phase of the system's life cycle. Seeing this dilemma as a strategic choice goes even further to acknowledging that the degree of isolation and autonomy granted towards a temporary organizational form can be influenced by organizational actors, and as such is reminiscent of the influential work on boundary management (e.g. Ancona 1990; Ancona and Caldwell 1992). Including the insights from this stream of work into temporary organizational systems research could, in the author's view, help to uncover how, when and for which types of temporary systems designing the temporary system as fully embedded or stand-alone leads to the most optimal outcomes.

The context theme uncovers another gap. As Table 2 demonstrates, the majority of empirical research has taken a cross-sectional approach, or tracked the life cycle of a single temporary system (50, vs 22 longitudinal studies; see Table 2). The problem with such designs lies in processes that extend beyond the lifetime of a single temporary organizational system. This relates to the systems being temporary: many (contextual) processes extend over their time-delimited life cycle. In temporary systems research, particularly, longitudinal designs are necessary to study more thoroughly a broad number of important topics mentioned in this review. For instance, with regard to role-based coordination in temporary organizational systems, Bechky herself notes that longitudinal analyses of role enactments of participants over subsequent temporary system memberships need to be undertaken in order to gain more support for how role structure and role enactment shape co-ordination in social systems (2006, p. 14). Also with regard to repeat collaboration over succeeding temporary systems memberships, longitudinal research is needed to probe further into the conditions under which temporary organizational forms with strong embeddedness in prior relations perform worse (Sorenson and Waguespack 2006) and, in contrast, under which conditions such repetitive temporary systems are associated with higher performance (Schwab and Miner 2008). Longitudinal designs would also allow the inputs (knowledge, procedures, experience) and outputs (knowledge, products) of temporary systems to be more fully appreciated beyond their start and end, and how these relate to prior and succeeding projects (Engwall 2003). As such, a direction for future research is for temporary organizational forms research to expand its temporal scope (Engwall 2003) into longitudinal analyses of succeeding tem-

porary systems. Ideally, such longitudinal designs should also take sample size into account. As is clear from Table 2, by far the majority of empirical studies are small N case studies (56, vs 16 large N studies). Although the specific strengths of in-depth, small N studies are well known, especially in emerging fields (Eisenhardt 1989), it seems that the field has reached a state in which future research should test a number of insights that have been developed in the large number of in-depth case studies in larger samples. In particular, large N confirmatory studies will help the field in finding common areas of agreement, on which future research can solidly build further.

As a final direction for future research, context should also be seen as a dimension of variation, namely by the degree of embeddedness of a temporary organizational form in this context (e.g. Løwendahl 1995; Schwab and Miner 2008). Indeed, where Schwab and Miner (2008) proposed that at one extreme temporary organizational forms can be stand-alone or fully embedded, Løwendahl (1995) quite similarly proposed that the degree of embeddedness of temporary structures ranges between fully incorporated by the enduring context, and full authority. Following a structuration perspective, one might conclude that, in strongly embedded temporary systems, interior processes are to a relatively large extent influenced by structure (as in Bechky 2006), whereas in relatively less embedded temporary systems the balance rather tips to emergent action (as in Meyerson *et al.* 1996; Weick 1993). Interestingly, Lundin and Söderholm (1995) demonstrated that the degree of openness or embeddedness of the system with regard to functioning is also a matter of project phase: ideally, projects are strongly embedded in the organizational context at the start and beginning of the project, but isolated in the execution phase.

Conclusion

In conclusion, this paper set out to offer an integrated overview of the current body of literature on temporary organizational forms as a separate field of research, in order to identify fruitful areas for future research which scholars hoping to expand research on this increasingly important set of organizational forms could consider. In so doing, the author attempted to draw attention to the significant topic of temporary organization, its diversity and its implications for broader theories of organizing.

More specifically, four broad themes in the literature were identified: time, team, task and context. Within each of these themes, the key questions and debates were noted, and the current state of the art was summarized. The gaps in what we have come to learn of this increasingly important form of organization and avenues for future research to consider were also noted. One overarching future research direction concerned acknowledging and systematically identifying the variation between different types of temporary organizational forms, and it was attempted to show how each theme can be viewed as a theoretically relevant dimension of variation. As a first attempt towards integration around the concept of temporary organizational forms, however, this study suffers from a number of limitations, and they should be noted.

First, the present review categorized the temporary organizational form as a separate field of research around its 'temporariness', whereas this field of research has only recently come to be regarded as distinct. This is not necessarily a drawback, but provided some challenges in coming to a coherent review. Second, because of the diversity in the reviewed body of literature, this review at times needed to stay on a general level, providing a broad overview rather than a meticulous account of very detailed findings. After this effort, the author would suggest future research to go in-depth into one of the particular areas set out in this review. As a third and final limitation, it is a reality that some potentially relevant literature might have been missed. As stated before, however, it is strongly felt that the publications identified are representative of the current body of scholarly literature and, as such, it might not be necessary or realistic to include every possible work (see Provan *et al.* 2007). The fragmentation of the field of temporary organizational forms and the few integrative efforts that have been conducted in it thus far, may have, on the one hand, led to the conclusion that this literature review is perhaps not exhaustive but, on the other hand, equally underlines the relevance of such a study in the first place.

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*Indicates study is part of the literature sample.

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